

ABSTRACT

Pharmaceutical compositions, kits and methods for the treatment of cancer include a composition containing a modified metallothionein (MT) amino acid sequence or fragment thereof that binds the megalin receptor less avidly than naturally-occurring metallothionein. The modified metallothionein can be in a conjugate with multiple molecules of a therapeutic divalent metal ion. Embodiments of the modified metallothionein complex can have a negative or neutral charge or a size greater than 70kD. Such compositions are useful in methods for treating heavy metal poisoning and inhibiting renal uptake of therapeutic divalent metal ions.